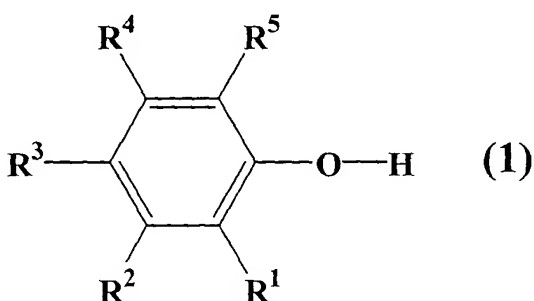


**WHAT IS CLAIMED IS:**

1. An organohydrosiloxane composition comprising:

- 5           a. one or more organohydrosiloxane compounds, each having at least one [-HSiR-O-] unit, wherein R = C<sub>1</sub>-C<sub>18</sub> linear, branched, or cyclic alkyl, C<sub>1</sub>-C<sub>18</sub> linear, branched, or cyclic alkoxy, or substituted or unsubstituted aryl; and
- b. an antioxidant compound of Formula (1),

10



            wherein the antioxidant compound is a phenolic compound and is present in an amount between about 1 ppm to about 5000 ppm, and

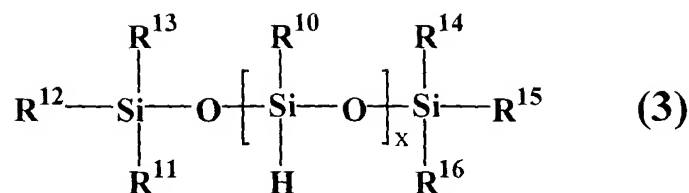
15           wherein R<sup>1</sup> through R<sup>5</sup> are each independently H, OH, C<sub>1</sub>-C<sub>18</sub> linear, branched, or cyclic alkyl, C<sub>1</sub>-C<sub>18</sub> linear, branched, or cyclic alkoxy or substituted or unsubstituted aryl.

2. The composition of claim 1, wherein said one or more

20           organohydrosiloxane compounds are one or more linear compounds, one or more cyclic compounds, and any combinations thereof.

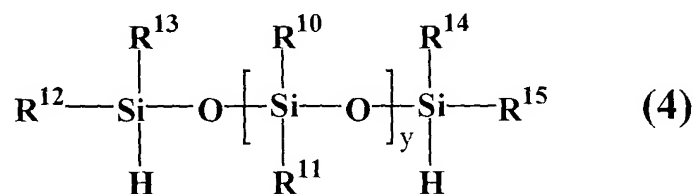
3. The composition of claim 2, wherein said one or more linear

25           compounds have a formula according to Formula (3),



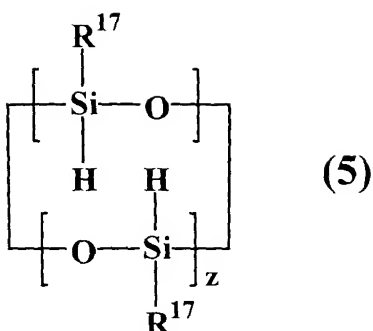
- 5        wherein R<sup>10</sup> is C<sub>1</sub>-C<sub>18</sub> linear, branched, or cyclic alkyl, C<sub>1</sub>-C<sub>18</sub> linear, branched, or cyclic alkoxy, or substituted or unsubstituted aryl; R<sup>11</sup> through R<sup>16</sup> are each independently H, C<sub>1</sub>-C<sub>18</sub> linear, branched, or cyclic alkyl, C<sub>1</sub>-C<sub>18</sub> linear, branched, or cyclic alkoxy, or substituted or unsubstituted aryl; x is about 1 to about 20; and x can equal 0
- 10        when at least one of R<sup>11</sup> through R<sup>16</sup> is H.
4.        The composition of claim 3, wherein R<sup>10</sup> is methyl, ethyl, propyl, butyl, or cyclohexyl; R<sup>11</sup> through R<sup>16</sup> is methyl, ethyl, propyl, butyl, cyclohexyl or H; and x is about 1 to about 10.
- 15        5.        The composition of claim 3, wherein said linear organohydrosiloxanes of Formula (3) are selected from the group consisting of: 1,1,1,3,3-pentamethyldisiloxane, 1,1,1,3,3-pentaethyldisiloxane, 1,1,1,3,3-pentaphenyldisiloxane, 1,1,1,3,3-penta(4-methylphenyl)disiloxane, 1,1,5,5-tetramethyl-3-
- 20        ethyltrisiloxane, 1,1,5,5-tetraethyl-3-methyltrisiloxane, 1,1,3,5,5-pentamethyltrisiloxane, 1,1,3,5,5-pentaethyltrisiloxane, 1,1,3,5,5-pentaphenyltrisiloxane, 1,1,3,5,5-penta(4-methylphenyl)trisiloxane, 1,1,1,5,5,5-heptamethyl-3-ethyltrisiloxane, 1,1,1,5,5,5-heptaethyl-3-
- 25        methyltrisiloxane, 1,1,1,3,5,5,5-heptamethyltrisiloxane, 1,1,1,3,5,5,5-heptaethyltrisiloxane, 1,1,1,3,5,5,5-heptaphenyltrisiloxane, 1,1,1,3,5,5,5-hepta(4-methylphenyl)trisiloxane, 1,1,3,5,7,7-hexamethyltetrasiloxane, 1,1,3,5,7,7-hexaethyltetrasiloxane, 1,1,3,5,7,7-hexaphenyltetrasiloxane, 1,1,3,5,7,7-hexa(4-
- 30        methylphenyl)tetrasiloxane, 1,1,1,3,5,7,7,7-octamethyltetrasiloxane,

- 1,1,1,3,5,7,7,7-octaethyltetrasiloxane, 1,1,1,3,5,7,7,7-octaphenyltetrasiloxane, 1,1,1,3,5,7,7,7-octa(4-methylphenyl)tetrasiloxane, 1,1,3,5,7,9,9-heptamethylpentasiloxane, 1,1,3,5,7,9,9-heptamethylpentasiloxane, 1,1,3,5,7,9,9-heptaethylpentasiloxane, 1,1,3,5,7,9,9-heptaphenylpentasiloxane, 1,1,3,5,7,9,9-hepta(4-methylphenyl)pentasiloxane, 1,1,1,3,5,7,9,9,9-nonamethylpentasiloxane, 1,1,1,3,5,7,9,9,9-nonaethylpentasiloxane, 1,1,1,3,5,7,9,9,9-nonaphenylpentasiloxane, 1,1,1,3,5,7,9,9,9-nona(4-methylphenyl)pentasiloxane, 1,1,3,5,7,9,11,11-octaamethylhexasiloxane, 1,1,3,5,7,9,11,11-octaethylhexasiloxane, 1,1,3,5,7,9,11,11-octaphenylhexasiloxane, 1,1,3,5,7,9,11,11-octa(4-methylphenyl)hexasiloxane, 1,1,1,3,5,7,9,11,11,11-decamethylhexasiloxane, 1,1,1,3,5,7,9,11,11,11-decaethylhexasiloxane, 1,1,1,3,5,7,9,11,11,11-decaphenylhexasiloxane, 1,1,1,3,5,7,9,11,11,11-deca(4-methylphenyl)hexasiloxane, and any combinations thereof.
6. The composition of claim 2, wherein said one or more linear compounds have a formula according to Formula (4),



- wherein  $\text{R}^{10}$  is  $\text{C}_1$ - $\text{C}_{18}$  linear, branched, or cyclic alkyl,  $\text{C}_1$ - $\text{C}_{18}$  linear, branched, or cyclic alkoxy, or substituted or unsubstituted aryl;  $\text{R}^{11}$  through  $\text{R}^{16}$  are each independently H,  $\text{C}_1$ - $\text{C}_{18}$  linear, branched, or cyclic alkyl,  $\text{C}_1$ - $\text{C}_{18}$  linear, branched, or cyclic alkoxy, or substituted or unsubstituted aryl; and  $y$  is about 0 to about 20.

7. The composition of claim 6, wherein R<sup>10</sup> is methyl, ethyl, propyl, butyl, or cyclohexyl; R<sup>11</sup> through R<sup>16</sup> is methyl, ethyl, propyl, butyl, cyclohexyl or H; and y is about 0 to about 8.
- 5 8. The composition of claim 6, wherein said linear organohydrosiloxanes of Formula (4) are selected from the group consisting of: 1,1-diethyl-3,3-dimethyldisiloxane, 1,1,3,3-tetramethyldisiloxane, 1,1,3,3-tetraethyltrisiloxane, 1,1,3,3-tetraphenyldisiloxane, 1,1,3,3-tetra(4-methylphenyl)disiloxane,  
 10 1,1,5,5-tetramethyl-3,3-diethyltrisiloxane, 1,1,5,5-tetraethyl-3,3-dimethyltrisiloxane, 1,1,3,3,5,5-hexamethyltrisiloxane, 1,1,3,3,5,5-hexaethyltrisiloxane, 1,1,3,3,5,5-hexaphenyltrisiloxane, 1,1,3,3,5,5-hexa(4-methylphenyl)trisiloxane, 1,1,3,3,5,5,7,7-octamethyltetrasiloxane, 1,1,3,5,7,7-octaethyltetrasiloxane,  
 15 1,1,3,3,5,5,7,7-octaphenyltetrasiloxane, 1,1,3,3,5,5,7,7-octa(4-methylphenyl)tetrasiloxane, 1,1,3,3,5,5,7,7,9,9-decamethylpentasiloxane, 1,1,3,3,5,5,7,7,9,9-decaethylpentasiloxane, 1,1,3,3,5,5,7,7,9,9-decaphenylpentasiloxane, 1,1,3,3,5,5,7,7,9,9-deca(4-methylphenyl)pentasiloxane, 1,1,3,3,5,5,7,7,9,9,11,11-dodecaamethylhexasiloxane, 1,1,3,3,5,5,7,7,9,9,11,11-dodecaethylhexasiloxane, 1,1,3,3,5,5,7,7,9,9,11,11-dodecaphenylhexasiloxane, and 1,1,3,3,5,5,7,7,9,9,11,11-dodeca(4-methylphenyl)hexasiloxane, and any combinations thereof.  
 20  
 25
9. The composition of claim 2, wherein said one or more cyclic compounds have a formula according to Formula (5),



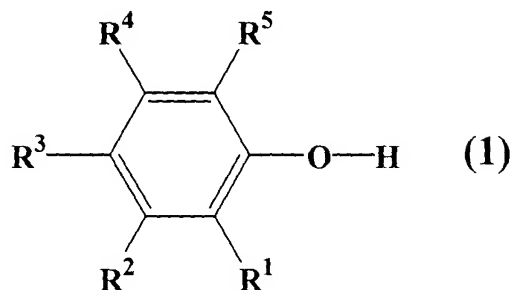
wherein  $\text{R}^{17}$  is independently  $\text{C}_1$ - $\text{C}_{18}$  linear, branched, or cyclic alkyl,  
 5  $\text{C}_1$ - $\text{C}_{18}$  linear, branched, or cyclic alkoxy, or substituted or  
 unsubstituted aryl; and  $z$  is about 2 to about 21.

10. The composition of claim 9, wherein  $\text{R}^{17}$  is methyl, ethyl, propyl,  
 butyl, or cyclohexyl; and  $z$  is about 2 to about 11.
- 10 11. The composition of claim 9, wherein said cyclic  
 organohydrosiloxanes of Formula (5) are selected from the group  
 consisting of: 1,3,5-trimethylcyclotrisiloxane, 1,3,5-  
 triethylcyclotrisiloxane, 1,3,5-triphenylcyclotrisiloxane, 1,3,5-tri(4-  
 15 methylphenyl)cyclotrisiloxane, 1,3,5,7-tetramethylcyclotetrasiloxane,  
 1,3,5,7-tetraethylcyclotetrasiloxane, 1,3,5,7-  
 tetraphenylcyclotetrasiloxane, 1,3,5,7-tetra(4-  
 methylphenyl)cyclotetrasiloxane, 1,5-dimethyl-3,7-  
 diethylcyclotetrasiloxane, 1,3-dimethyl-5,7-diethylcyclotetrasiloxane,  
 20 1,3,5,7,9-pentamethylcyclopentasiloxane, 1,3,5,7,9-  
 pentaethylcyclopentasiloxane, 1,3,5,7,9-  
 pentaphenylcyclopentasiloxane, 1,3,5,7,9-penta(4-  
 methylphenyl)cyclopentasiloxane, 1,3,5,7,9,11-  
 hexamethylcyclohexasiloxane, 1,3,5,7,9,11-  
 25 hexaethylcyclohexasiloxane, 1,3,5,7,9,11-  
 hexaphenylcyclohexasiloxane, 1,3,5,7,9,11-hexa(4-  
 methylphenyl)cyclohexasiloxane, 1,5,9-trimethyl-3,7,11-

triethylcyclohexasiloxane, 1,3,5-trimethyl-7,9,11-triethylcyclohexasiloxane, and any combinations thereof.

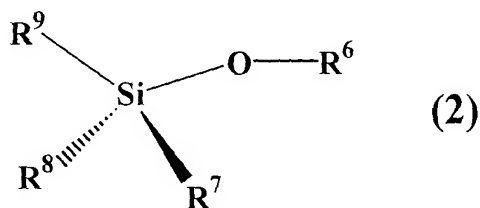
12. The composition of claim 1, wherein R<sup>1</sup> through R<sup>5</sup> are H, OH, methyl, ethyl, methoxy, ethoxy, and tert-butyl.
13. The composition of claim 1, wherein said antioxidant compound of Formula (1) is selected from the group consisting of: phenol, hydroquinone, 4-methylphenol, 3-methylphenol, 2-methylphenol, 4-ethylphenol, 4-propylphenol, 4-iso-propylphenol, 4-butylphenol, 4-sec-butylphenol, 4-iso-butylphenol, 4-tert-butylphenol, 4-methoxyphenol, 3-methoxyphenol, 2-methoxyphenol, 4-ethoxyphenol, 4-propoxyphenol, 4-butoxyphenol, 2,4-di-tert-butylphenol, 2-(1-methylbutyl)phenol, 2-(benzyloxy)phenol, 2-tert-butyl-6-methylphenol, 3,4,5-trimethoxyphenol, 3-ethoxy-4-methylphenol, 4-benzyloxyphenol, 4-benzyl-2,6-di-tert-butylphenol, 2-(2-butenyl)phenol, 2-(4-methylbenzyl)phenol, 2,6-di-tert-butyl-4-methylphenol (BHT), 1,2-dihydroxybenzene, 2,4,6-tris-benzyloxyphenol, 2,4-dicyclohexyl-5-methylphenol, 6-tert-butyl-1,2-dihydroxybenzene, and any combinations thereof.
14. The composition of claim 1, wherein said antioxidant compound is present in an amount between about 1 ppm to about 1000 ppm.
15. The composition of claim 1, wherein said antioxidant compound is present in an amount between about 25 ppm to about 200 ppm.
16. An organohydrosiloxane composition comprising:
  - a. one or more organohydrosiloxane compounds, each having at least one [-HSiR-O-] unit, wherein R = C<sub>1</sub>-C<sub>18</sub> linear, branched, or cyclic alkyl, C<sub>1</sub>-C<sub>18</sub> linear, branched, or cyclic alkoxy, or substituted or unsubstituted aryl;

- b. an antioxidant compound of Formula (1),



- 5 wherein the antioxidant compound is a phenolic compound and is present in an amount between about 1 ppm to about 5000 ppm, and wherein  $\text{R}^1$  through  $\text{R}^5$  are each independently H, OH,  $\text{C}_1$ - $\text{C}_{18}$  linear, branched, or cyclic alkyl,  $\text{C}_1$ - $\text{C}_{18}$  linear, branched, or cyclic alkoxy or substituted or  
 10 unsubstituted aryl; and

- c. an alkoxy silane of Formula (2),



- 15 wherein said alkoxy silane is present in an amount between about 1 ppm and about 5000 ppm; and wherein  $\text{R}^6$  is a  $\text{C}_1$ - $\text{C}_{18}$  linear, branched, or cyclic alkyl or substituted or unsubstituted aryl; and  $\text{R}^7$ ,  $\text{R}^8$ , and  $\text{R}^9$  are independently H,  $\text{C}_1$ - $\text{C}_{18}$  linear, branched, or cyclic alkyl,  $\text{C}_1$ - $\text{C}_{18}$  linear, branched, or cyclic alkoxy or substituted or unsubstituted aryl.

17. The composition of claim 16, wherein  $\text{R}^1$  through  $\text{R}^5$  are H, OH, methyl, ethyl, methoxy, ethoxy, or tert-butyl.

17. The composition of claim 16, wherein R<sup>1</sup> through R<sup>5</sup> are H, OH, methyl, ethyl, methoxy, ethoxy, or tert-butyl.
18. The composition of claim 16, wherein said antioxidant compound of Formula (1) is selected from the group consisting of: phenol, hydroquinone, 4-methylphenol, 3-methylphenol, 2-methylphenol, 4-ethylphenol, 4-propylphenol, 4-iso-propylphenol, 4-butylphenol, 4-sec-butylphenol, 4-iso-butylphenol, 4-tert-butylphenol, 4-methoxyphenol, 3-methoxyphenol, 2-methoxyphenol, 4-ethoxyphenol, 4-propoxyphenol, 4-butoxyphenol, 2,4-di-tert-butylphenol, 2-(1-methylbutyl)phenol, 2-(benzyloxy)phenol, 2-tert-butyl-6-methylphenol, 3,4,5-trimethoxyphenol, 3-ethoxy-4-methylphenol, 4-benzyloxyphenol, 4-benzyl-2,6-di-tert-butylphenol, 2-(2-butenyl)phenol, 2-(4-methylbenzyl)phenol, 2,6-di-tert-butyl-4-methylphenol (BHT), 1,2-dihydroxybenzene, 2,4,6-tris-benzyloxyphenol, 2,4-dicyclohexyl-5-methylphenol, 6-tert-butyl-1,2-dihydroxybenzene, and any combinations thereof.
19. The composition of claim 16, wherein said antioxidant compound is present in an amount between about 1 ppm to about 1000 ppm.
20. The composition of claim 16, wherein said antioxidant compound is present in an amount between about 25 ppm to about 200 ppm.
21. The composition of claim 16, wherein R<sup>6</sup> is methyl, ethyl, or propyl; and R<sup>7</sup>, R<sup>8</sup> and R<sup>9</sup> are methyl, ethyl, propyl, methoxy, ethoxy or propoxy.
22. The composition of claim 16, wherein said alkoxysilane of Formula (2) is selected from the group consisting of: trimethylmethoxysilane, triethylmethoxysilane, tripropylmethoxysilane, triphenylmethoxysilane, tri(4-methylphenyl)methoxysilane, dimethyldimethoxysilane, diethyldimethoxysilane,



dipropyldimethoxysilane, dipenyldimethoxysilane, di(4-methylphenyl)dimethoxysilane, methyltrimethoxysilane, ethyltrimethoxysilane, propyltrimethoxysilane, phenyltrimethoxysilane, 4-methylphenyltrimethoxysilane, trimethylethoxysilane, triethylethoxysilane, tripropylethoxysilane, triphenylethoxysilane, tri(4-methylphenyl)ethoxysilane, dimethyldiethoxysilane, diethyldiethoxysilane, dipropyldiethoxysilane, dipenyldiethoxysilane, di(4-methylphenyl)diethoxysilane, methyltriethoxysilane, ethyltriethoxysilane, propyltriethoxysilane, phenyltriethoxysilane, 4-methylphenyltriethoxysilane, trimethylpropoxysilane, triethylpropoxysilane, tripropylpropoxysilane, triphenylpropoxysilane, tri(4-methylphenyl)propoxysilane, dimethyldipropoxysilane, diethyldipropoxysilane, dipropyldipropoxysilane, dipenyldipropoxysilane, di(4-methylphenyl)dipropoxysilane, methyltripropoxysilane, ethyltripropoxysilane, propyltripropoxysilane, phenyltripropoxysilane, 4-methylphenyltripropoxysilane, trimethylbutoxysilane, triethylbutoxysilane, tripropylbutoxysilane, triphenylbutoxysilane, tri(4-methylphenyl)butoxysilane, dimethyldibutoxysilane, diethyldibutoxysilane, dipropyldibutoxysilane, dipenyldibutoxysilane, di(4-methylphenyl)dibutoxysilane, methyltributoxysilane, ethyltributoxysilane, propyltributoxysilane, phenyltributoxysilane, 4-methylphenyltributoxysilane, trimethylphenoxysilane, triethylphenoxysilane, tripropylphenoxysilane, triphenylphenoxysilane, tri(4-methylphenyl)phenoxysilane, dimethyldiphenoxysilane, diethyldiphenoxysilane, dipropyldiphenoxysilane, dipenyldiphenoxysilane, di(4-methylphenyl)diphenoxysilane, methyltriphenoxysilane, ethyltriphenoxysilane, propyltriphenoxysilane, phenyltriphenoxysilane, 4-methylphenyltriphenoxysilane, trimethyl(4-methylphenoxy)silane, triethyl(4-methylphenoxy)silane, tripropyl(4-methylphenoxy)silane, triphenyl(4-methylphenoxy)silane, tri(4-

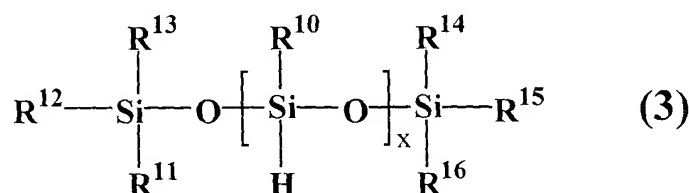
methylphenyl)(4-methylphenoxy)silane, dimethyldi(4-  
 methylphenoxy)silane, diethyldi(4-methylphenoxy)silane,  
 dipropyldi(4-methylphenoxy)silane, diphenyldi(4-  
 methylphenoxy)silane, di(4-methylphenyl)di(4-methylphenoxy)silane,  
 5 methyltri(4-methylphenoxy)silane, ethyltri(4-methylphenoxy)silane,  
 propyltri(4-methylphenoxy)silane, phenyltri(4-methylphenoxy)silane,  
 4-methylphenyltri(4-methylphenoxy)silane, and any combinations  
 thereof.

10 23. The composition of claim 16, wherein said alkoxysilane is present in  
 an amount between about 10 ppm to about 2500 ppm.

24. The composition of claim 16, wherein said alkoxysilane is present in  
 an amount between about 100 ppm to about 1000 ppm.

15 25. The composition of claim 16, wherein said one or more  
 organohydrosiloxane compounds are one or more linear  
 compounds, one or more cyclic compounds, and any combinations  
 thereof.

20 26. The composition of claim 25, wherein said one or more linear  
 compounds have a formula according to Formula (3),



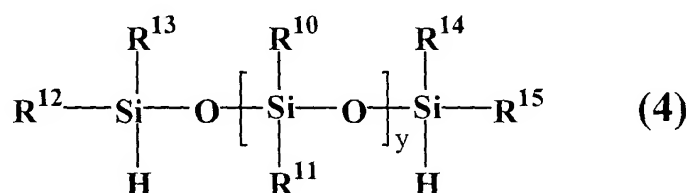
25  
 wherein R<sup>10</sup> is C<sub>1</sub>-C<sub>18</sub> linear, branched, or cyclic alkyl, C<sub>1</sub>-C<sub>18</sub> linear,  
 branched, or cyclic alkoxy, or substituted or unsubstituted aryl; R<sup>11</sup>  
 through R<sup>16</sup> are each independently H, C<sub>1</sub>-C<sub>18</sub> linear, branched, or  
 30 cyclic alkyl, C<sub>1</sub>-C<sub>18</sub> linear, branched, or cyclic alkoxy, or substituted

or unsubstituted aryl; x is about 1 to about 20; and x can equal 0 when at least one of R<sup>11</sup> through R<sup>16</sup> is H.

27. The composition of claim 26, wherein R<sup>10</sup> is methyl, ethyl, propyl, butyl, or cyclohexyl; R<sup>11</sup> through R<sup>16</sup> is methyl, ethyl, propyl, butyl, cyclohexyl or H; and x is about 1 to about 10.
28. The composition of claim 26, wherein said linear organohydrosiloxanes of Formula (3) are selected from the group consisting of: 1,1,1,3,3-pentamethyldisiloxane, 1,1,1,3,3-pentaethyldisiloxane, 1,1,1,3,3-pentaphenyldisiloxane, 1,1,1,3,3-penta(4-methylphenyl)disiloxane, 1,1,5,5-tetramethyl-3-ethyltrisiloxane, 1,1,5,5-tetraethyl-3-methyltrisiloxane, 1,1,3,5,5-pentamethyltrisiloxane, 1,1,3,5,5-pentaethyltrisiloxane, 1,1,3,5,5-pentaphenyltrisiloxane, 1,1,3,5,5-penta(4-methylphenyl)trisiloxane, 1,1,1,5,5,5-heptamethyl-3-ethyltrisiloxane, 1,1,1,5,5,5-heptaethyl-3-methyltrisiloxane, 1,1,1,3,5,5,5-heptamethyltrisiloxane, 1,1,1,3,5,5,5-heptaethyltrisiloxane, 1,1,1,3,5,5,5-heptaphenyltrisiloxane, 1,1,1,3,5,5,5-hepta(4-methylphenyl)trisiloxane, 1,1,3,5,7,7-hexamethyltetrasiloxane, 1,1,3,5,7,7-hexaethyltetrasiloxane, 1,1,3,5,7,7-hexaphenyltetrasiloxane, 1,1,3,5,7,7-hexa(4-methylphenyl)tetrasiloxane, 1,1,1,3,5,7,7,7-octamethyltetrasiloxane, 1,1,1,3,5,7,7,7-octaethyltetrasiloxane, 1,1,1,3,5,7,7,7-octaphenyltetrasiloxane, 1,1,1,3,5,7,7,7-octa(4-methylphenyl)tetrasiloxane, 1,1,3,5,7,9,9-heptamethylpentasiloxane, 1,1,3,5,7,9,9-heptamethylpentasiloxane, 1,1,3,5,7,9,9-heptaethylpentasiloxane, 1,1,3,5,7,9,9-heptaphenylpentasiloxane, 1,1,3,5,7,9,9-hepta(4-methylphenyl)pentasiloxane, 1,1,1,3,5,7,9,9,9-nonamethylpentasiloxane, 1,1,1,3,5,7,9,9,9-nonaethylpentasiloxane, 1,1,1,3,5,7,9,9,9-nonaphenylpentasiloxane, 1,1,1,3,5,7,9,9,9-nona(4-methylphenyl)pentasiloxane, 1,1,3,5,7,9,11,11-octaamethylhexasiloxane, 1,1,3,5,7,9,11,11-octaethylhexasiloxane,

1,1,3,5,7,9,11,11-octaphenylhexasiloxane, 1,1,3,5,7,9,11,11-octa(4-methylphenyl)hexasiloxane, 1,1,1,3,5,7,9,11,11,11-decamethylhexasiloxane, 1,1,1,3,5,7,9,11,11,11-decaethylhexasiloxane, 1,1,1,3,5,7,9,11,11,11-decaphenylhexasiloxane, 1,1,1,3,5,7,9,11,11,11-deca(4-methylphenyl)hexasiloxane, and any combinations thereof.

29. The composition of claim 25, wherein said one or more linear compounds have a formula according to Formula (4),

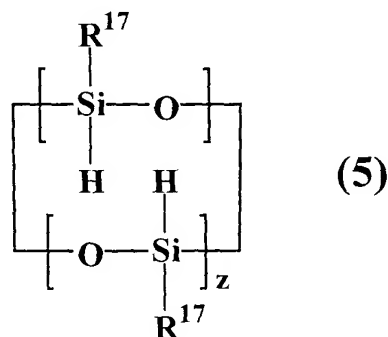


wherein  $\text{R}^{10}$  is  $\text{C}_1$ - $\text{C}_{18}$  linear, branched, or cyclic alkyl,  $\text{C}_1$ - $\text{C}_{18}$  linear, branched, or cyclic alkoxy, or substituted or unsubstituted aryl;  $\text{R}^{11}$  through  $\text{R}^{16}$  are each independently H,  $\text{C}_1$ - $\text{C}_{18}$  linear, branched, or cyclic alkyl,  $\text{C}_1$ - $\text{C}_{18}$  linear, branched, or cyclic alkoxy, or substituted or unsubstituted aryl; and y is about 0 to about 20.

30. The composition of claim 29, wherein  $\text{R}^{10}$  is methyl, ethyl, propyl, butyl, or cyclohexyl;  $\text{R}^{11}$  through  $\text{R}^{16}$  is methyl, ethyl, propyl, butyl, cyclohexyl or H; and y is about 0 to about 8.

31. The composition of claim 29, wherein said linear organohydrosiloxanes of Formula (4) are selected from the group consisting of: 1,1-diethyl-3,3-dimethyldisiloxane, 1,1,3,3-tetramethyldisiloxane, 1,1,3,3-tetraethyltrisiloxane, 1,1,3,3-tetraphenyldisiloxane, 1,1,3,3-tetra(4-methylphenyl)disiloxane, 1,1,5,5-tetramethyl-3,3-diethyltrisiloxane, 1,1,5,5-tetraethyl-3,3-dimethyltrisiloxane, 1,1,3,3,5,5-hexamethyltrisiloxane, 1,1,3,3,5,5-hexaethyltrisiloxane, 1,1,3,3,5,5-hexaphenyltrisiloxane, 1,1,3,3,5,5-

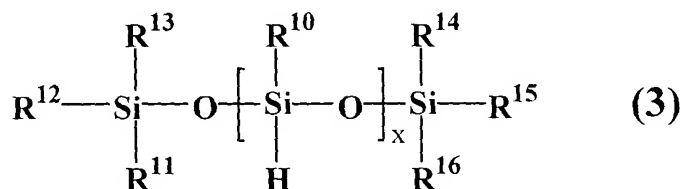
- hexa(4-methylphenyl)trisiloxane, 1,1,3,3,5,5,7,7-octamethyltetrasiloxane, 1,1,3,5,7,7-octaethyltetrasiloxane, 1,1,3,3,5,5,7,7-octaphenyltetrasiloxane, 1,1,3,3,5,5,7,7-octa(4-methylphenyl)tetrasiloxane, 1,1,3,3,5,5,7,7,9,9-decamethylpentasiloxane, 1,1,3,3,5,5,7,7,9,9-decaethylpentasiloxane, 1,1,3,3,5,5,7,7,9,9-decaphenylpentasiloxane, 1,1,3,3,5,5,7,7,9,9-deca(4-methylphenyl)pentasiloxane, 1,1,3,3,5,5,7,7,9,9,11,11-dodecaamethylhexasiloxane, 1,1,3,3,5,5,7,7,9,9,11,11-dodecaethylhexasiloxane, 1,1,3,3,5,5,7,7,9,9,11,11-dodecaphenylhexasiloxane, and 1,1,3,3,5,5,7,7,9,9,11,11-dodeca(4-methylphenyl)hexasiloxane, and any combinations thereof.
32. The composition of claim 25, wherein said one or more cyclic compounds have a formula according to Formula (5),



- wherein  $\text{R}^{17}$  is independently  $\text{C}_1$ - $\text{C}_{18}$  linear, branched, or cyclic alkyl,  $\text{C}_1$ - $\text{C}_{18}$  linear, branched, or cyclic alkoxy, or substituted or unsubstituted aryl; and  $z$  is about 2 to about 21.
33. The composition of claim 32, wherein  $\text{R}^{17}$  is methyl, ethyl, propyl, butyl, or cyclohexyl; and  $z$  is about 2 to about 11.

34. The composition of claim 32, wherein said cyclic organohydrosiloxanes of Formula (5) are selected from the group consisting of: 1,3,5-trimethylcyclotrisiloxane, 1,3,5-triethylcyclotrisiloxane, 1,3,5-triphenylcyclotrisiloxane, 1,3,5-tri(4-methylphenyl)cyclotrisiloxane, 1,3,5,7-tetramethylcyclotetrasiloxane, 1,3,5,7-tetraethylcyclotetrasiloxane, 1,3,5,7-tetraphenylcyclotetrasiloxane, 1,3,5,7-tetra(4-methylphenyl)cyclotetrasiloxane, 1,5-dimethyl-3,7-diethylcyclotetrasiloxane, 1,3-dimethyl-5,7-diethylcyclotetrasiloxane, 1,3,5,7,9-pentamethylcyclopentasiloxane, 1,3,5,7,9-pentaethylcyclopentasiloxane, 1,3,5,7,9-pentaphenylcyclopentasiloxane, 1,3,5,7,9-penta(4-methylphenyl)cyclopentasiloxane, 1,3,5,7,9,11-hexamethylcyclohexasiloxane, 1,3,5,7,9,11-hexaethylcyclohexasiloxane, 1,3,5,7,9,11-hexaphenylcyclohexasiloxane, 1,3,5,7,9,11-hexa(4-methylphenyl)cyclohexasiloxane, 1,5,9-trimethyl-3,7,11-triethylcyclohexasiloxane, 1,3,5-trimethyl-7,9,11-triethylcyclohexasiloxane, and any combinations thereof.
35. The composition of claim 16, wherein said composition comprises:

- a. one or more organohydrosiloxane compounds of Formula (3),



25

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wherein  $\text{R}^{10}$  is  $\text{C}_1\text{-C}_{18}$  linear, branched, or cyclic alkyl,  $\text{C}_1\text{-C}_{18}$  linear, branched, or cyclic alkoxy, or substituted or unsubstituted aryl, and  $\text{R}^{11}$  through  $\text{R}^{16}$  are each independently H,  $\text{C}_1\text{-C}_{18}$  linear, branched, or cyclic alkyl,  $\text{C}_1\text{-}$

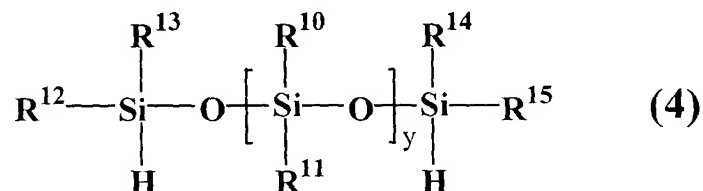
C<sub>18</sub> linear, branched, or cyclic alkoxy, or substituted or unsubstituted aryl; and x is about 1 to about 10;

5            b.        an antioxidant compound of said Formula (1), wherein R<sup>1</sup> through R<sup>5</sup> are H, OH, methyl, ethyl, methoxy, ethoxy, and tert-butyl; and

10           c.        an alkoxysilane of said Formula (2), wherein R<sup>6</sup> is methyl, ethyl, or propyl; and R<sup>7</sup>, R<sup>8</sup> and R<sup>9</sup> are methyl, ethyl, propyl, methoxy, ethoxy or propoxy.

36.        The composition of claim 16, wherein said composition comprises:

15           a.        one or more organohydrosiloxane compounds of Formula (4),



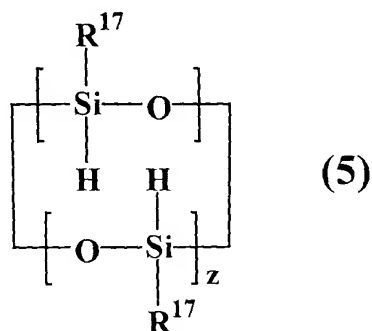
20           wherein R<sup>10</sup> is C<sub>1</sub>-C<sub>18</sub> linear, branched, or cyclic alkyl, C<sub>1</sub>-C<sub>18</sub> linear, branched, or cyclic alkoxy, or substituted or unsubstituted aryl, and R<sup>11</sup> through R<sup>16</sup> are each independently H, C<sub>1</sub>-C<sub>18</sub> linear, branched, or cyclic alkyl, C<sub>1</sub>-C<sub>18</sub> linear, branched, or cyclic alkoxy, or substituted or unsubstituted aryl; and y is about 0 to about 20;

25           b.        an antioxidant compound of said Formula (1), wherein R<sup>1</sup> through R<sup>5</sup> are H, OH, methyl, ethyl, methoxy, ethoxy, and tert-butyl; and

- c. an alkoxysilane of said Formula (2), wherein  $R^6$  is methyl, ethyl, or propyl; and  $R^7$ ,  $R^8$  and  $R^9$  are methyl, ethyl, propyl, methoxy, ethoxy or propoxy.

5 37. The composition of claim 16, wherein said composition comprises:

- a. one or more organohydrosiloxane compounds of Formula (5),



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wherein  $R^{17}$  is independently  $C_1$ - $C_{18}$  linear, branched, or cyclic alkyl,  $C_1$ - $C_{18}$  linear, branched, or cyclic alkoxy, or substituted or unsubstituted aryl; and  $z$  is about 2 to about 11;

15

- b. an antioxidant compound of said Formula (1), wherein  $R^1$  through  $R^5$  are H, OH, methyl, ethyl, methoxy, ethoxy, and tert-butyl; and

20

- c. an alkoxysilane of said Formula (2), wherein  $R^6$  is methyl, ethyl, or propyl; and  $R^7$ ,  $R^8$  and  $R^9$  are methyl, ethyl, propyl, methoxy, ethoxy or propoxy.

38. A process for forming an oxide layer on a substrate comprising the steps of:

25

- a. introducing an organohydrosiloxane composition into a gas stream, thereby forming a process vapor;



- b. contacting a surface of said substrate with said process vapor; and
- c. decomposing said process vapor, thereby forming said oxide layer on said substrate,

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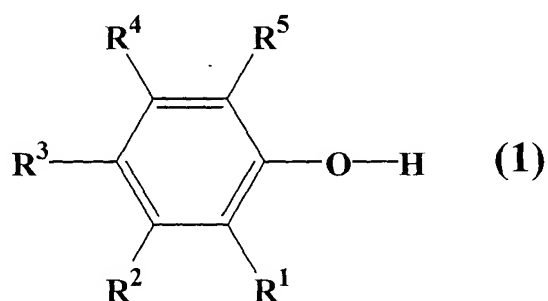
wherein the organohydrosiloxane composition comprises:

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one or more organohydrosiloxane compounds, each having at least one [-HSiR-O-] unit, wherein R = C<sub>1</sub>-C<sub>18</sub> linear, branched, or cyclic alkyl, C<sub>1</sub>-C<sub>18</sub> linear, branched, or cyclic alkoxy, or substituted or unsubstituted aryl; and

an antioxidant compound of Formula (1),

15



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wherein the antioxidant compound is a phenolic compound and is present in an amount between about 1 ppm to about 5000 ppm, and wherein R<sup>1</sup> through R<sup>5</sup> are each independently H, OH, C<sub>1</sub>-C<sub>18</sub> linear, branched, or cyclic alkyl, C<sub>1</sub>-C<sub>18</sub> linear, branched, or cyclic alkoxy or substituted or unsubstituted aryl.

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39. The process of claim 38, wherein said substrate is a semiconductor substrate.

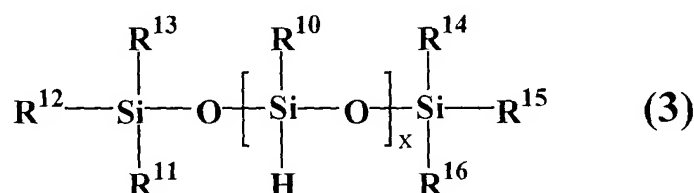
40. The process of claim 38, wherein said oxide layer is a doped silicon oxide layer comprising a dopant selected from the group consisting of: hydrogen, carbon, nitrogen, and any combinations thereof.
- 5 41. The process of claim 38, wherein said oxide layer is a doped silicon oxide layer comprising a dopant selected from the group consisting of: arsenic, boron, phosphorous, and any combinations thereof.
- 10 42. The process of claim 38, wherein said gas stream comprises gas selected from the group consisting of: nitrogen, helium, argon, oxygen, ozone, ammonia, nitrous oxide, carbon dioxide, carbon monoxide, SiH<sub>4</sub>, silane, silicon tetrafluoride, hydrazine, and any combinations thereof.
- 15 43. The process of claim 38, wherein said process vapor further comprises a chemical precursor selected from the group consisting of: amines, aminoalcohols, silanes, siloxanes, alkanes, alkenes, alkynes, alcohols, esters, ketones, aldehydes, carboxylic acids, and any combinations thereof.
- 20 44. The process of claim 38, wherein said process vapor further comprises a chemical precursor selected from the group consisting of: arsines, alkylarsenates, phosphines, alkylphosphates, alkylphosphites, boranes, alkylborates, and any combinations thereof.
- 25 45. The process of claim 38, wherein said decomposing step comprises a decomposing means selected from the group consisting of: plasma, heating, chemical reaction, and any combinations thereof.
- 30 46. The process of claim 45, wherein said heating means comprises a temperature between about 100°C and about 800°C.

47. The process of claim 38, wherein said one or more organohydrosiloxane compounds are one or more linear compounds, one or more cyclic compounds, and any combinations thereof.

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48. The process of claim 47, wherein said one or more linear compounds have a formula according to Formula (3),

10



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wherein  $\text{R}^{10}$  is  $\text{C}_1\text{-C}_{18}$  linear, branched, or cyclic alkyl,  $\text{C}_1\text{-C}_{18}$  linear, branched, or cyclic alkoxy, or substituted or unsubstituted aryl;  $\text{R}^{11}$  through  $\text{R}^{16}$  are each independently H,  $\text{C}_1\text{-C}_{18}$  linear, branched, or cyclic alkyl,  $\text{C}_1\text{-C}_{18}$  linear, branched, or cyclic alkoxy, or substituted or unsubstituted aryl;  $x$  is about 1 to about 20; and  $x$  can equal 0 when at least one of  $\text{R}^{11}$  through  $\text{R}^{16}$  is H.

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49. The process of claim 48, wherein  $\text{R}^{10}$  is methyl, ethyl, propyl, butyl, or cyclohexyl;  $\text{R}^{11}$  through  $\text{R}^{16}$  is methyl, ethyl, propyl, butyl, cyclohexyl or H; and  $x$  is about 1 to about 10.

25

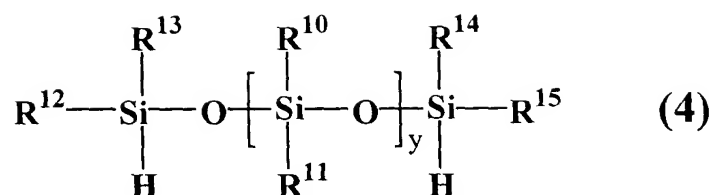
50. The process of claim 48, wherein said linear organohydrosiloxanes of Formula (3) are selected from the group consisting of: 1,1,1,3,3-pentamethyldisiloxane, 1,1,1,3,3-pentaethyldisiloxane, 1,1,1,3,3-pentaphenyldisiloxane, 1,1,1,3,3-penta(4-methylphenyl)disiloxane, 1,1,5,5-tetramethyl-3-ethyltrisiloxane, 1,1,5,5-tetraethyl-3-methyltrisiloxane, 1,1,3,5,5-pentamethyltrisiloxane, 1,1,3,5,5-

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pentaethyltrisiloxane, 1,1,3,5,5-pentaphenyltrisiloxane, 1,1,3,5,5-  
 penta(4-methylphenyl)trisiloxane, 1,1,1,5,5,5-heptamethyl-3-  
 ethyltrisiloxane, 1,1,1,5,5,5-heptaethyl-3-methyltrisiloxane,  
 1,1,1,3,5,5,5-heptamethyltrisiloxane, 1,1,1,3,5,5,5-  
 5 heptaethyltrisiloxane, 1,1,1,3,5,5,5-heptaphenyltrisiloxane,  
 1,1,1,3,5,5,5-hepta(4-methylphenyl)trisiloxane, 1,1,3,5,7,7-  
 hexamethyltetrasiloxane, 1,1,3,5,7,7-hexaethyltetrasiloxane,  
 1,1,3,5,7,7-hexaphenyltetrasiloxane, 1,1,3,5,7,7-hexa(4-  
 methylphenyl)tetrasiloxane, 1,1,1,3,5,7,7,7-octamethyltetrasiloxane,  
 10 1,1,1,3,5,7,7,7-octaethyltetrasiloxane, 1,1,1,3,5,7,7,7-  
 octaphenyltetrasiloxane, 1,1,1,3,5,7,7,7-octa(4-  
 methylphenyl)tetrasiloxane, 1,1,3,5,7,9,9-heptamethylpentasiloxane,  
 1,1,3,5,7,9,9-heptamethylpentasiloxane, 1,1,3,5,7,9,9-  
 heptaethylpentasiloxane, 1,1,3,5,7,9,9-heptaphenylpentasiloxane,  
 15 1,1,3,5,7,9,9-hepta(4-methylphenyl)pentasiloxane, 1,1,1,3,5,7,9,9,9-  
 nonamethylpentasiloxane, 1,1,1,3,5,7,9,9,9-  
 nonaethylpentasiloxane, 1,1,1,3,5,7,9,9,9-  
 nonaphenylpentasiloxane, 1,1,1,3,5,7,9,9,9- nona(4-  
 methylphenyl)pentasiloxane, 1,1,3,5,7,9,11,11-  
 20 octaamethylhexasiloxane, 1,1,3,5,7,9,11,11-octaethylhexasiloxane,  
 1,1,3,5,7,9,11,11-octaphenylhexasiloxane, 1,1,3,5,7,9,11,11-octa(4-  
 methylphenyl)hexasiloxane, 1,1,1,3,5,7,9,11,11,11-  
 decamethylhexasiloxane, 1,1,1,3,5,7,9,11,11,11-  
 decaethylhexasiloxane, 1,1,1,3,5,7,9,11,11,11-  
 25 decaphenylhexasiloxane, 1,1,1,3,5,7,9,11,11,11-deca(4-  
 methylphenyl)hexasiloxane, and any combinations thereof.

51. The process of claim 47, wherein said one or more linear  
 compounds have a formula according to Formula (4),

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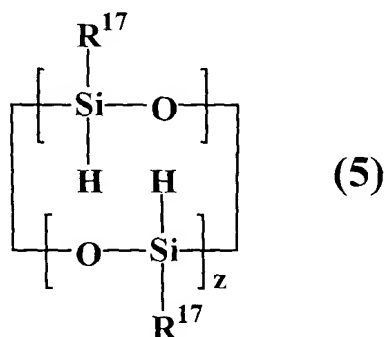


wherein R<sup>10</sup> is C<sub>1</sub>-C<sub>18</sub> linear, branched, or cyclic alkyl, C<sub>1</sub>-C<sub>18</sub> linear, branched, or cyclic alkoxy, or substituted or unsubstituted aryl; R<sup>11</sup> through R<sup>16</sup> are each independently H, C<sub>1</sub>-C<sub>18</sub> linear, branched, or cyclic alkyl, C<sub>1</sub>-C<sub>18</sub> linear, branched, or cyclic alkoxy, or substituted or unsubstituted aryl; and y is about 0 to about 20.

52. The process of claim 51, wherein R<sup>10</sup> is methyl, ethyl, propyl, butyl, or cyclohexyl; R<sup>11</sup> through R<sup>16</sup> is methyl, ethyl, propyl, butyl, cyclohexyl or H; and y is about 0 to about 8.
53. The process of claim 51, wherein said linear organohydrosiloxanes of Formula (4) are selected from the group consisting of: 1,1-diethyl-3,3-dimethyldisiloxane, 1,1,3,3-tetramethyldisiloxane, 1,1,3,3-tetraethyltrisiloxane, 1,1,3,3-tetraphenyldisiloxane, 1,1,3,3-tetra(4-methylphenyl)disiloxane, 1,1,5,5-tetramethyl-3,3-diethyltrisiloxane, 1,1,5,5-tetraethyl-3,3-dimethyltrisiloxane, 1,1,3,3,5,5-hexamethyltrisiloxane, 1,1,3,3,5,5-hexaethyltrisiloxane, 1,1,3,3,5,5-hexaphenyltrisiloxane, 1,1,3,3,5,5-hexa(4-methylphenyl)trisiloxane, 1,1,3,3,5,5,7,7-octamethyltetrasiloxane, 1,1,3,5,7,7-octaethyltetrasiloxane, 1,1,3,3,5,5,7,7-octaphenyltetrasiloxane, 1,1,3,3,5,5,7,7-octa(4-methylphenyl)tetrasiloxane, 1,1,3,3,5,5,7,7,9,9-decamethylpentasiloxane, 1,1,3,3,5,5,7,7,9,9-decaethylpentasiloxane, 1,1,3,3,5,5,7,7,9,9-decaphenylpentasiloxane, 1,1,3,3,5,5,7,7,9,9-deca(4-methylphenyl)pentasiloxane, 1,1,3,3,5,5,7,7,9,9,11,11-dodecaamethylhexasiloxane, 1,1,3,3,5,5,7,7,9,9,11,11-dodecaethylhexasiloxane, 1,1,3,3,5,5,7,7,9,9,11,11-

dodecaphenylhexasiloxane, and 1,1,3,3,5,5,7,7,9,9,11,11-dodeca(4-methylphenyl)hexasiloxane, and any combinations thereof.

54. The process of claim 47, wherein said one or more cyclic  
5 compounds have a formula according to Formula (5),



- 10 wherein  $\text{R}^{17}$  is independently  $\text{C}_1$ - $\text{C}_{18}$  linear, branched, or cyclic alkyl,  $\text{C}_1$ - $\text{C}_{18}$  linear, branched, or cyclic alkoxy, or substituted or unsubstituted aryl; and  $z$  is about 2 to about 21.

55. The process of claim 54, wherein  $\text{R}^{17}$  is methyl, ethyl, propyl, butyl,  
15 or cyclohexyl; and  $z$  is about 2 to about 11.

56. The process of claim 54, wherein said cyclic organohydrosiloxanes  
of Formula (5) are selected from the group consisting of: 1,3,5-  
trimethylcyclotrisiloxane, 1,3,5-triethylcyclotrisiloxane, 1,3,5-  
20 triphenylcyclotrisiloxane, 1,3,5-tri(4-methylphenyl)cyclotrisiloxane,  
1,3,5,7-tetramethylcyclotetrasiloxane, 1,3,5,7-  
tetraethylcyclotetrasiloxane, 1,3,5,7-tetraphenylcyclotetrasiloxane,  
1,3,5,7-tetra(4-methylphenyl)cyclotetrasiloxane, 1,5-dimethyl-3,7-  
diethylcyclotetrasiloxane, 1,3-dimethyl-5,7-diethylcyclotetrasiloxane,  
25 1,3,5,7,9-pentamethylcyclopentasiloxane, 1,3,5,7,9-  
pentaethylcyclopentasiloxane, 1,3,5,7,9-  
pentaphenylcyclopentasiloxane, 1,3,5,7,9-penta(4-

methylphenyl)cyclopentasiloxane, 1,3,5,7,9,11-  
 hexamethylcyclohexasiloxane, 1,3,5,7,9,11-  
 hexaethylcyclohexasiloxane, 1,3,5,7,9,11-  
 hexaphenylcyclohexasiloxane, 1,3,5,7,9,11-hexa(4-  
 5 methylphenyl)cyclohexasiloxane, 1,5,9-trimethyl-3,7,11-  
 triethylcyclohexasiloxane, 1,3,5-trimethyl-7,9,11-  
 triethylcyclohexasiloxane, and any combinations thereof.

57. The process of claim 38, wherein R<sup>1</sup> through R<sup>5</sup> are H, OH, methyl,  
 10 ethyl, methoxy, ethoxy, and tert-butyl.

58. The process of claim 38, wherein said antioxidant compound of  
 Formula (1) is selected from the group consisting of: phenol,  
 hydroquinone, 4-methylphenol, 3-methylphenol, 2-methylphenol, 4-  
 15 ethylphenol, 4-propylphenol, 4-iso-propylphenol, 4-butylphenol, 4-  
 sec-butylphenol, 4-iso-butylphenol, 4-tert-butylphenol, 4-  
 methoxyphenol, 3-methoxyphenol, 2-methoxyphenol, 4-  
 ethoxyphenol, 4-propoxyphenol, 4-butoxyphenol, 2,4-di-tert-  
 butylphenol, 2-(1-methylbutyl)phenol, 2-(benzyloxy)phenol, 2-tert-  
 20 butyl-6-methylphenol, 3,4,5-trimethoxyphenol, 3-ethoxy-4-  
 methylphenol, 4-benzyloxyphenol, 4-benzyl-2,6-di-tert-butylphenol,  
 2-(2-butenyl)phenol, 2-(4-methylbenzyl)phenol, 2,6-di-tert-butyl-4-  
 methylphenol (BHT), 1,2-dihydroxybenzene, 2,4,6-tris-  
 benzyloxyphenol, 2,4-dicyclohexyl-5-methylphenol, 6-tert-butyl-1,2-  
 25 dihydroxybenzene, and any combinations thereof.

59. The process of claim 38, wherein said antioxidant compound is  
 present in an amount between about 1 ppm to about 1000 ppm.

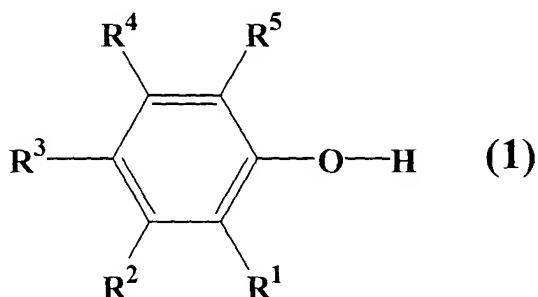
30 60. A process for forming an oxide layer on a substrate comprising the  
 steps of:

- a. introducing an organohydrosiloxane composition into a gas stream, thereby forming a process vapor;
- b. contacting a surface of said substrate with said process vapor; and
- 5 c. decomposing said process vapor, thereby forming said oxide layer on said substrate,

wherein the organohydrosiloxane composition comprises:

- 10 one or more organohydrosiloxane compounds, each having at least one  $[-\text{HSiR}-\text{O}-]$  unit, wherein  $\text{R} = \text{C}_1\text{-C}_{18}$  linear, branched, or cyclic alkyl,  $\text{C}_1\text{-C}_{18}$  linear, branched, or cyclic alkoxy, or substituted or unsubstituted aryl;

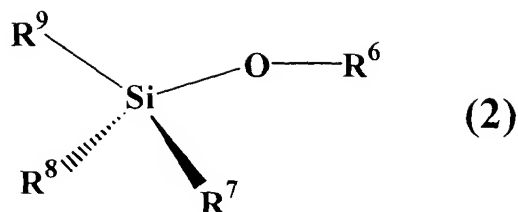
- 15 an antioxidant compound of Formula (1),



- 20 wherein the antioxidant compound is a phenolic compound and is present in an amount between about 1 ppm to about 5000 ppm, and wherein  $\text{R}^1$  through  $\text{R}^5$  are each independently H, OH,  $\text{C}_1\text{-C}_{18}$  linear, branched, or cyclic alkyl,  $\text{C}_1\text{-C}_{18}$  linear, branched, or cyclic alkoxy or substituted or
- 25 unsubstituted aryl; and

an alkoxysilane of Formula (2),





5                    wherein said alkoxysilane is present in an amount  
                       between about 1 ppm to about 5000 ppm; and wherein  
                        $R^6$  is a  $C_1$ - $C_{18}$  linear, branched, or cyclic alkyl or  
                       substituted or unsubstituted aryl; and  $R^7$ ,  $R^8$ , and  $R^9$   
                       are independently H,  $C_1$ - $C_{18}$  linear, branched, or cyclic  
 10                    alkyl,  $C_1$ - $C_{18}$  linear, branched, or cyclic alkoxy or  
                       substituted or unsubstituted aryl.

61.    The process of claim 60, wherein said substrate is a semiconductor  
           substrate.
- 15    62.    The process of claim 60, wherein said oxide layer is a doped silicon  
           oxide layer comprising a dopant selected from the group consisting  
           of: hydrogen, carbon, nitrogen, and any combinations thereof.
- 20    63.    The process of claim 60, wherein said oxide layer is a doped silicon  
           oxide layer comprising a dopant selected from the group consisting  
           of: arsenic, boron, phosphorous, and any combinations thereof.
- 25    64.    The process of claim 60, wherein said gas stream comprises gas  
           selected from the group consisting of: nitrogen, helium, argon,  
           oxygen, ozone, ammonia, nitrous oxide, carbon dioxide, carbon  
           monoxide,  $SiH_4$ , silane, silicon tetrafluoride, hydrazine, and any  
           combinations thereof.
- 30    65.    The process of claim 60, wherein said process vapor further  
           comprises a chemical precursor selected from the group consisting

of: amines, aminoalcohols, silanes, siloxanes, alkanes, alkenes, alkynes, alcohols, esters, ketones, aldehydes, carboxylic acids, and any combinations thereof.

- 5    66.    The process of claim 60, wherein said process vapor further comprises a chemical precursor selected from the group consisting of: arsines, alkylarsenates, phosphines, alkylphosphates, alkylphosphites, boranes, alkylborates, and any combinations thereof.
- 10
67.    The process of claim 60, wherein said decomposing step comprises a decomposing means selected from the group consisting of: plasma, heating, chemical reaction, and any combinations thereof.
- 15    68.    The process of claim 67, wherein said heating means comprises a temperature between about 100°C and about 800°C.
69.    The process of claim 60, wherein R<sup>1</sup> through R<sup>5</sup> are H, OH, methyl, ethyl, methoxy, ethoxy, and tert-butyl.
- 20
70.    The process of claim 60, wherein said antioxidant compound of Formula (1) is selected from the group consisting of: phenol, hydroquinone, 4-methylphenol, 3-methylphenol, 2-methylphenol, 4-ethylphenol, 4-propylphenol, 4-iso-propylphenol, 4-butylphenol, 4-sec-butylphenol, 4-iso-butylphenol, 4-tert-butylphenol, 4-methoxyphenol, 3-methoxyphenol, 2-methoxyphenol, 4-ethoxyphenol, 4-propoxyphenol, 4-butoxyphenol, 2,4-di-tert-butylphenol, 2-(1-methylbutyl)phenol, 2-(benzyloxy)phenol, 2-tert-butyl-6-methylphenol, 3,4,5-trimethoxyphenol, 3-ethoxy-4-methylphenol, 4-benzyloxyphenol, 4-benzyl-2,6-di-tert-butylphenol, 2-(2-butenyl)phenol, 2-(4-methylbenzyl)phenol, 2,6-di-tert-butyl-4-methylphenol (BHT), 1,2-dihydroxybenzene, 2,4,6-tris-
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- 30

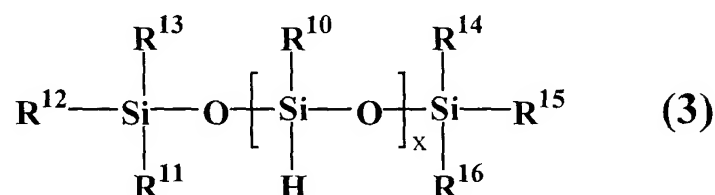
benzyloxyphenol, 2,4-dicyclohexyl-5-methylphenol, 6-tert-butyl-1,2-dihydroxybenzene, and any combinations thereof.

71. The process of claim 60, wherein said antioxidant compound is present in an amount between about 1 ppm to about 1000 ppm.
72. The process of claim 60, wherein R<sup>6</sup> is methyl, ethyl, or propyl; and R<sup>7</sup>, R<sup>8</sup> and R<sup>9</sup> are methyl, ethyl, propyl, methoxy, ethoxy or propoxy.
73. The process of claim 60, wherein said alkoxysilane of Formula (2) is selected from the group consisting of: trimethylmethoxysilane, triethylmethoxysilane, tripropylmethoxysilane, triphenylmethoxysilane, tri(4-methylphenyl)methoxysilane, dimethyldimethoxysilane, diethyldimethoxysilane, dipropyldimethoxysilane, diphenyldimethoxysilane, di(4-methylphenyl)dimethoxysilane, methyltrimethoxysilane, ethyltrimethoxysilane, propyltrimethoxysilane, phenyltrimethoxysilane, 4-methylphenyltrimethoxysilane, trimethylethoxysilane, triethylethoxysilane, tripropylethoxysilane, triphenylethoxysilane, tri(4-methylphenyl)ethoxysilane, dimethyldiethoxysilane, diethyldiethoxysilane, dipropyldiethoxysilane, diphenyldiethoxysilane, di(4-methylphenyl)diethoxysilane, methyltriethoxysilane, ethyltriethoxysilane, propyltriethoxysilane, phenyltriethoxysilane, 4-methylphenyltriethoxysilane, trimethylpropoxysilane, triethylpropoxysilane, tripropylpropoxysilane, triphenylpropoxysilane, tri(4-methylphenyl)propoxysilane, dimethyldipropoxysilane, diethyldipropoxysilane, dipropyldipropoxysilane, diphenyldipropoxysilane, di(4-methylphenyl)dipropoxysilane, methyltripropoxysilane, ethyltripropoxysilane, propyltripropoxysilane, phenyltripropoxysilane, 4-methylphenyltripropoxysilane, trimethylbutoxysilane, triethylbutoxysilane, tripropylbutoxysilane, triphenylbutoxysilane, tri(4-methylphenyl)butoxysilane,

- dimethyldibutoxysilane, diethyldibutoxysilane,  
dipropyldibutoxysilane, diphenyldibutoxysilane, di(4-  
methylphenyl)dibutoxysilane, methyltributoxysilane,  
ethyltributoxysilane, propyltributoxysilane, phenyltributoxysilane, 4-  
methylphenyltributoxysilane, trimethylphenoxysilane,  
triethylphenoxysilane, tripropylphenoxysilane,  
triphenylphenoxysilane, tri(4-methylphenyl)phenoxysilane,  
dimethyldiphenoxysilane, diethyldiphenoxysilane,  
dipropyldiphenoxysilane, diphenyldiphenoxysilane, di(4-  
methylphenyl)diphenoxysilane, methyltriphenoxysilane,  
ethyltriphenoxysilane, propyltriphenoxysilane,  
phenyltriphenoxysilane, 4-methylphenyltriphenoxysilane, trimethyl(4-  
methylphenoxy)silane, triethyl(4-methylphenoxy)silane, tripropyl(4-  
methylphenoxy)silane, triphenyl(4-methylphenoxy)silane, tri(4-  
methylphenyl)(4-methylphenoxy)silane, dimethyldi(4-  
methylphenoxy)silane, diethyldi(4-methylphenoxy)silane,  
dipropyldi(4-methylphenoxy)silane, diphenyldi(4-  
methylphenoxy)silane, di(4-methylphenyl)di(4-methylphenoxy)silane,  
methyltri(4-methylphenoxy)silane, ethyltri(4-methylphenoxy)silane,  
propyltri(4-methylphenoxy)silane, phenyltri(4-methylphenoxy)silane,  
4-methylphenyltri(4-methylphenoxy)silane, and any combinations  
thereof.
74. The process of claim 60, wherein said alkoxysilane is present in an  
amount between about 10 ppm to about 2500 ppm.
75. The process of claim 60, wherein said alkoxysilane is present in an  
amount between about 100 ppm to about 1000 ppm.
76. The process of claim 60, wherein said one or more  
organohydrosiloxane compounds are one or more linear  
compounds, one or more cyclic compounds, and any combinations  
thereof.

77. The process of claim 76, wherein said one or more linear compounds have a formula according to Formula (3),

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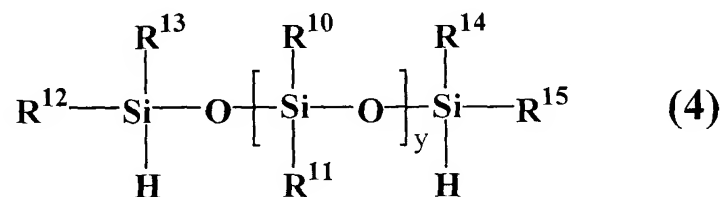
- 10 wherein R<sup>10</sup> is C<sub>1</sub>-C<sub>18</sub> linear, branched, or cyclic alkyl, C<sub>1</sub>-C<sub>18</sub> linear, branched, or cyclic alkoxy, or substituted or unsubstituted aryl; R<sup>11</sup> through R<sup>16</sup> are each independently H, C<sub>1</sub>-C<sub>18</sub> linear, branched, or cyclic alkyl, C<sub>1</sub>-C<sub>18</sub> linear, branched, or cyclic alkoxy, or substituted or unsubstituted aryl; x is 1 to about 20; and x can equal 0 when at least one of R<sup>11</sup> through R<sup>16</sup> is H.
- 15

78. The process of claim 77, wherein R<sup>10</sup> is methyl, ethyl, propyl, butyl, or cyclohexyl; R<sup>11</sup> through R<sup>16</sup> is methyl, ethyl, propyl, butyl, cyclohexyl or H; and x is about 1 to about 10.

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79. The process of claim 77, wherein said linear organohydrosiloxanes of Formula (3) are selected from the group consisting of: 1,1,1,3,3-pentamethyldisiloxane, 1,1,1,3,3-pentaethyldisiloxane, 1,1,1,3,3-pentaphenyldisiloxane, 1,1,1,3,3-penta(4-methylphenyl)disiloxane, 1,1,5,5-tetramethyl-3-ethyltrisiloxane, 1,1,5,5-tetraethyl-3-methyltrisiloxane, 1,1,3,5,5-pentamethyltrisiloxane, 1,1,3,5,5-pentaethyldisiloxane, 1,1,3,5,5-pentaphenyltrisiloxane, 1,1,3,5,5-penta(4-methylphenyl)trisiloxane, 1,1,1,5,5,5-heptamethyl-3-ethyltrisiloxane, 1,1,1,5,5,5-heptaethyl-3-methyltrisiloxane, 1,1,1,3,5,5,5-heptamethyltrisiloxane, 1,1,1,3,5,5,5-
- 25
- 30

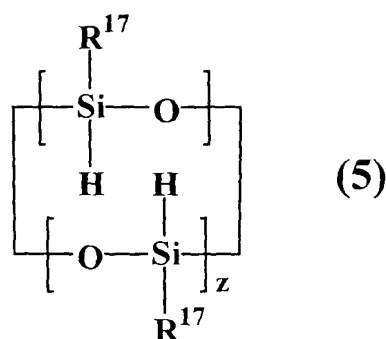
- heptaethyltrisiloxane, 1,1,1,3,5,5,5-heptaphenyltrisiloxane,  
 1,1,1,3,5,5,5-hepta(4-methylphenyl)trisiloxane, 1,1,3,5,7,7-  
 hexamethyltetrasiloxane, 1,1,3,5,7,7-hexaethyltetrasiloxane,  
 1,1,3,5,7,7-hexaphenyltetrasiloxane, 1,1,3,5,7,7-hexa(4-  
 5 methylphenyl)tetrasiloxane, 1,1,1,3,5,7,7,7-octamethyltetrasiloxane,  
 1,1,1,3,5,7,7,7-octaethyltetrasiloxane, 1,1,1,3,5,7,7,7-  
 octaphenyltetrasiloxane, 1,1,1,3,5,7,7,7-octa(4-  
 methylphenyl)tetrasiloxane, 1,1,3,5,7,9,9-heptamethylpentasiloxane,  
 1,1,3,5,7,9,9-heptamethylpentasiloxane, 1,1,3,5,7,9,9-  
 10 heptaethylpentasiloxane, 1,1,3,5,7,9,9-heptaphenylpentasiloxane,  
 1,1,3,5,7,9,9-hepta(4-methylphenyl)pentasiloxane, 1,1,1,3,5,7,9,9,9-  
 nonamethylpentasiloxane, 1,1,1,3,5,7,9,9,9-  
 nonaethylpentasiloxane, 1,1,1,3,5,7,9,9,9-  
 nonaphenylpentasiloxane, 1,1,1,3,5,7,9,9,9- nona(4-  
 15 methylphenyl)pentasiloxane, 1,1,3,5,7,9,11,11-  
 octaamethylhexasiloxane, 1,1,3,5,7,9,11,11-octaethylhexasiloxane,  
 1,1,3,5,7,9,11,11-octaphenylhexasiloxane, 1,1,3,5,7,9,11,11-octa(4-  
 methylphenyl)hexasiloxane, 1,1,1,3,5,7,9,11,11,11-  
 decamethylhexasiloxane, 1,1,1,3,5,7,9,11,11,11-  
 20 decaethylhexasiloxane, 1,1,1,3,5,7,9,11,11,11-  
 decaphenylhexasiloxane, 1,1,1,3,5,7,9,11,11,11-deca(4-  
 methylphenyl)hexasiloxane, and any combinations thereof.
80. The process of claim 76, wherein said one or more linear  
 25 compounds have a formula according to Formula (4),



- wherein  $\text{R}^{10}$  is  $\text{C}_1$ - $\text{C}_{18}$  linear, branched, or cyclic alkyl,  $\text{C}_1$ - $\text{C}_{18}$  linear,  
 30 branched, or cyclic alkoxy, or substituted or unsubstituted aryl;  $\text{R}^{11}$

through R<sup>16</sup> are each independently H, C<sub>1</sub>-C<sub>18</sub> linear, branched, or cyclic alkyl, C<sub>1</sub>-C<sub>18</sub> linear, branched, or cyclic alkoxy, or substituted or unsubstituted aryl; and y is about 0 to about 20.

- 5 81. The process of claim 80, wherein R<sup>10</sup> is methyl, ethyl, propyl, butyl, or cyclohexyl; R<sup>11</sup> through R<sup>16</sup> is methyl, ethyl, propyl, butyl, cyclohexyl or H; and y is about 0 to about 8.
  
- 10 82. The process of claim 80, wherein said linear organohydrosiloxanes of Formula (4) are selected from the group consisting of: 1,1-diethyl-3,3-dimethyldisiloxane, 1,1,3,3-tetramethyldisiloxane, 1,1,3,3-tetraethyltrisiloxane, 1,1,3,3-tetraphenyldisiloxane, 1,1,3,3-tetra(4-methylphenyl)disiloxane, 1,1,5,5-tetramethyl-3,3-diethyltrisiloxane, 1,1,5,5-tetraethyl-3,3-dimethyltrisiloxane, 1,1,3,3,5,5-hexamethyltrisiloxane, 1,1,3,3,5,5-hexaethyltrisiloxane, 1,1,3,3,5,5-hexaphenyltrisiloxane, 1,1,3,3,5,5-hexa(4-methylphenyl)trisiloxane, 1,1,3,3,5,5,7,7-octamethyltetrasiloxane, 1,1,3,5,7,7-octaethyltetrasiloxane, 1,1,3,3,5,5,7,7-octaphenyltetrasiloxane, 1,1,3,3,5,5,7,7-octa(4-methylphenyl)tetrasiloxane, 1,1,3,3,5,5,7,7,9,9-decamethylpentasiloxane, 1,1,3,3,5,5,7,7,9,9-decaethylpentasiloxane, 1,1,3,3,5,5,7,7,9,9-decaphenylpentasiloxane, 1,1,3,3,5,5,7,7,9,9-deca(4-methylphenyl)pentasiloxane, 1,1,3,3,5,5,7,7,9,9,11,11-dodecaamethylhexasiloxane, 1,1,3,3,5,5,7,7,9,9,11,11-dodecaethylhexasiloxane, 1,1,3,3,5,5,7,7,9,9,11,11-dodecaphenylhexasiloxane, and 1,1,3,3,5,5,7,7,9,9,11,11-dodeca(4-methylphenyl)hexasiloxane, and any combinations thereof.
  
- 30 83. The process of claim 76, wherein said one or more cyclic compounds have a formula according to Formula (5),



wherein  $\text{R}^{17}$  is independently  $\text{C}_1$ - $\text{C}_{18}$  linear, branched, or cyclic alkyl,  
 $\text{C}_1$ - $\text{C}_{18}$  linear, branched, or cyclic alkoxy, or substituted or  
 unsubstituted aryl; and  $z$  is about 2 to about 21.

84. The process of claim 83, wherein  $\text{R}^{17}$  is methyl, ethyl, propyl, butyl,  
 or cyclohexyl; and  $z$  is about 2 to about 11.

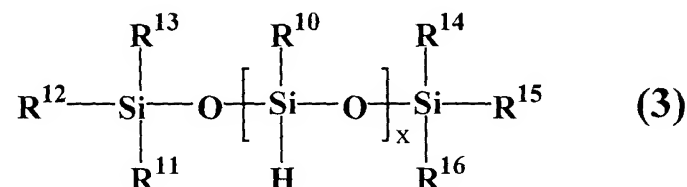
85. The process of claim 83, wherein said cyclic organohydrosiloxanes  
 of Formula (5) are selected from the group consisting of: 1,3,5-  
 trimethylcyclotrisiloxane, 1,3,5-triethylcyclotrisiloxane, 1,3,5-  
 triphenylcyclotrisiloxane, 1,3,5-tri(4-methylphenyl)cyclotrisiloxane,  
 1,3,5,7-tetramethylcyclotetrasiloxane, 1,3,5,7-  
 tetraethylcyclotetrasiloxane, 1,3,5,7-tetraphenylcyclotetrasiloxane,  
 1,3,5,7-tetra(4-methylphenyl)cyclotetrasiloxane, 1,5-dimethyl-3,7-  
 diethylcyclotetrasiloxane, 1,3-dimethyl-5,7-diethylcyclotetrasiloxane,  
 1,3,5,7,9-pentamethylcyclopentasiloxane, 1,3,5,7,9-  
 pentaethylcyclopentasiloxane, 1,3,5,7,9-  
 pentaphenylcyclopentasiloxane, 1,3,5,7,9-penta(4-  
 methylphenyl)cyclopentasiloxane, 1,3,5,7,9,11-  
 hexamethylcyclohexasiloxane, 1,3,5,7,9,11-  
 hexaethylcyclohexasiloxane, 1,3,5,7,9,11-  
 hexaphenylcyclohexasiloxane, 1,3,5,7,9,11-hexa(4-  
 methylphenyl)cyclohexasiloxane, 1,5,9-trimethyl-3,7,11-



triethylcyclohexasiloxane, 1,3,5-trimethyl-7,9,11-triethylcyclohexasiloxane, and any combinations thereof.

86. The process of claim 60, wherein said organohydrosiloxane composition comprises:

- a. one or more organohydrosiloxane compounds of Formula (3),



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wherein  $\text{R}^{10}$  is  $\text{C}_1$ - $\text{C}_{18}$  linear, branched, or cyclic alkyl,  $\text{C}_1$ - $\text{C}_{18}$  linear, branched, or cyclic alkoxy, or substituted or unsubstituted aryl, and  $\text{R}^{11}$  through  $\text{R}^{16}$  are each independently H,  $\text{C}_1$ - $\text{C}_{18}$  linear, branched, or cyclic alkyl,  $\text{C}_1$ - $\text{C}_{18}$  linear, branched, or cyclic alkoxy, or substituted or unsubstituted aryl; and  $x$  is about 1 to about 10;

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- b. an antioxidant compound of said Formula (1), wherein  $\text{R}^1$  through  $\text{R}^5$  are H, OH, methyl, ethyl, methoxy, ethoxy, and tert-butyl; and

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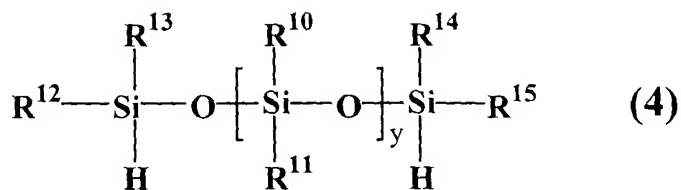
- c. an alkoxy silane of said Formula (2), wherein  $\text{R}^6$  is methyl, ethyl, or propyl; and  $\text{R}^7$ ,  $\text{R}^8$  and  $\text{R}^9$  are methyl, ethyl, propyl, methoxy, ethoxy or propoxy.

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87. The composition of claim 60, wherein said organohydrosiloxane composition comprises:

one or more organohydrosiloxane compounds of Formula (4),

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5 wherein R<sup>10</sup> is C<sub>1</sub>-C<sub>18</sub> linear, branched, or cyclic alkyl, C<sub>1</sub>-C<sub>18</sub> linear, branched, or cyclic alkoxy, or substituted or unsubstituted aryl, and R<sup>11</sup> through R<sup>16</sup> are each independently H, C<sub>1</sub>-C<sub>18</sub> linear, branched, or cyclic alkyl, C<sub>1</sub>-C<sub>18</sub> linear, branched, or cyclic alkoxy, or substituted or unsubstituted aryl; and y is about 0 to about 20;

10 an antioxidant compound of said Formula (1), wherein R<sup>1</sup> through R<sup>5</sup> are H, OH, methyl, ethyl, methoxy, ethoxy, and tert-butyl; and

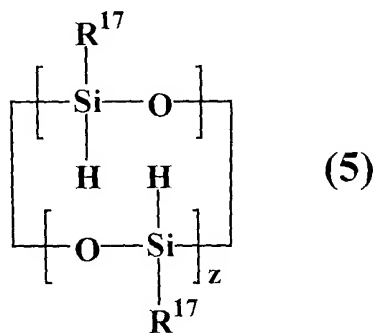
an alkoxysilane of said Formula (2), wherein R<sup>6</sup> is methyl, ethyl, or propyl; and R<sup>7</sup>, R<sup>8</sup> and R<sup>9</sup> are methyl, ethyl, propyl, methoxy, ethoxy or propoxy.

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88. The composition of claim 60, wherein said organohydrosiloxane composition comprises:

one or more organohydrosiloxane compounds of Formula (5),

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wherein R<sup>17</sup> is independently C<sub>1</sub>-C<sub>18</sub> linear, branched, or cyclic alkyl, C<sub>1</sub>-C<sub>18</sub> linear, branched, or cyclic alkoxy, or substituted or unsubstituted aryl; and z is about 2 to about 11;

5 an antioxidant compound of said Formula (1), wherein R<sup>1</sup> through R<sup>5</sup> are H, OH, methyl, ethyl, methoxy, ethoxy, and tert-butyl; and

an alkoxysilane of said Formula (2), wherein R<sup>6</sup> is methyl, ethyl, or propyl; and R<sup>7</sup>, R<sup>8</sup> and R<sup>9</sup> are methyl, ethyl, propyl, methoxy, ethoxy  
10 or propoxy.